

8. (Twice Amended) A method for achieving a target electrical impedance  $Z_t$  in an electrical power distribution structure including a pair of parallel planar conductors separated by a dielectric layer, the method comprising:

determining a separation distance  $h$  between the parallel planar conductors required to achieve the target electrical impedance  $Z_t$ ;

determining a required number  $n$  of a selected type of discrete electrical capacitor dependent upon an inductance of the electrical power distribution structure  $L_p$  and a mounted inductance  $L_m$  of a representative one of the selected type of discrete electrical capacitor when electrically coupled between the planar conductors, wherein  $n \geq 2$ , wherein the mounted inductance  $L_m$  is less than or equal to the inductance of the electrical power distribution structure  $L_p$ ;

using the target electrical impedance  $Z_t$  to determine a required value of mounted resistance  $R_{m-req}$  for the  $n$  discrete electrical capacitors;

selecting the required number  $n$  of the selected type of discrete electrical capacitor, wherein each of the  $n$  capacitors has a mounted resistance  $R_m$  substantially equal to the value of required mounted resistance  $R_{m-req}$ ; and

electrically coupling the  $n$  discrete electrical capacitors between the planar conductors.

17. (Amended) A method for achieving a target electrical impedance  $Z_t$  in an electrical power distribution structure including a pair of parallel planar conductors separated by a dielectric layer, the method comprising:

determining a first required number  $n_1$  of a selected type of discrete electrical capacitor dependent upon an inductance of the electrical power distribution

structure  $L_p$  and a mounted inductance  $L_m$  of a representative one of the selected type of discrete electrical capacitor when electrically coupled between the planar conductors, wherein  $n_1 \geq 2$ , and wherein the mounted inductance  $L_m$  of each of the selected type of discrete electrical capacitor is less than or equal to the inductance of the electrical power distribution structure  $L_p$ ;

determining a second required number  $n_2$  of the selected type of discrete electrical capacitor dependent upon a distance  $d_p$  around an outer perimeter of the electrical power distribution structure and a spacing distance  $S$  between adjacent discrete electrical capacitors, wherein  $n_2 \geq 2$ ;

performing the following if  $n_2 \geq n_1$ :

using the target electrical impedance  $Z_t$  to determine a required value of mounted resistance  $R_{m-req}$  for  $n_2$  of the discrete electrical capacitors;

selecting  $n_2$  of the discrete electrical capacitors, wherein each of the  $n_2$  capacitors has a mounted resistance  $R_m$  substantially equal to the value of required mounted resistance  $R_{m-req}$ ; and

electrically coupling the  $n_2$  discrete electrical capacitors between the planar conductors along an outer perimeter of the parallel planar conductors.

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Please add the following claims:

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31. (New) A method for achieving a target impedance in an electrical power distribution structure using a plurality of a decoupling capacitors, the method comprising:

determining a first required number  $n_1$  of a selected type of decoupling capacitor and a second required number  $n_2$  of the selected type of decoupling

capacitor, wherein  $n_1$  and  $n_2$  are  $\geq 2$ , wherein the plurality of decoupling capacitors includes the selected type of decoupling capacitor;  
determining if the plurality of decoupling capacitors is to be used to suppress plane resonances in the electrical power distribution system, wherein, if the plurality of decoupling capacitors is not to be used to suppress plane resonances, then:

distributing  $n_1$  of the selected type of decoupling capacitor across the electrical power distribution structure, wherein a mounted inductance  $L_m$  of the each of the selected type of capacitor is less than or equal to an inductance  $L_p$  of the electrical power distribution structure; and

if the plurality of decoupling capacitors is to be used to suppress plane resonances, then:

placing  $n_2$  of the selected type of decoupling capacitor around the perimeter of the electrical power distribution structure.

32. (New) The method as recited in claim 31, wherein the electrical power distribution structure includes a pair of planar conductors, and wherein each of the plurality of the selected type of decoupling capacitor is electrically coupled between the pair of planar conductors.
33. (New) The method as recited in claim 32, wherein the inductance of the electrical power distribution structure is determined by the formula  $L_p = (0.2 \cdot n \cdot \mu_0 \cdot h)$ , wherein  $n$  is the quantity of the selected type of decoupling capacitor,  $\mu_0$  is the permeability of free space, and wherein  $h$  is a distance between the planar conductors.
34. (New) The method as recited in claim 32, wherein each of the planar conductors has a distance  $d_p$  around an outer perimeter, wherein each of the  $n_2$  of the selected type of decoupling capacitor is placed at a distance  $S$  from each other, and wherein  $n_2$  is the quotient of  $d_p$  divided by  $S$ .